

REMARKS

The Applicants request reconsideration of the rejection.

Claims 7, 10-11, and 14-18 are now pending.

Claims 7-14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Nishiguchi et al., U.S. 6,025,310 (Nishiguchi) in view of the state of the art at the time of the invention as discussed in Applicants' Background section of the specification and Abe et al., U.S. 6,270,876 (Abe) and/or Zou et al., U.S. 6,294,490 (Zou). The Applicants traverse as follows.

The claims have been amended to emphasize a feature of the invention which clearly distinguishes the prior art of record. Now, the subject matter of Claim 9, for example, has been added to Claim 7 so that Claim 7 requires the lubricant coat to contain more than 30% of a lubricant component having perfluoropolyether structure contains

$-(OC_2F_4)_p-$, $-(OCF_2)_q-$, and a structure represented by:

$-(O-C_6H_3(-CF_3))_x$ (A)

(where $p=5-36$, $q=4-30$, $x=1-5$).

In rejecting Claim 9, the Examiner cited Nishiguchi, without apparent specificity. However, the Applicants have reviewed the entire disclosure of Nishiguchi, and found that

although X-1P is similar to the lubricant of the present invention, the content of X-1P should be kept to 0.36% to 0.82% so that the PFPE lubricant is free of haze. This level, of course, is much less than the percentage required by the present claims.

In this regard, the Applicants note that the patent suggests that the amount of X-1P may be up to about 70% of the critical X-1P content which does not cause haze. This 70% level, however, refers to a percentage of the above-quoted range, and thus is even smaller by comparison with the claim requirement.

The state of the art discussed in the Background section of the present application is cited as disclosing that the prior art knew that "overcoat thickness and flying height are in a trade-off relationship", that "the future task is to achieve a thickness of less than 5nm," that "enhancing hardness of the carbon-based overcoat to make it thinner" would be one way to lower thickness, and that by using the IBD method it is "easy to form a high hardness". Abe and Zou are cited as disclosing that their glass substrates enable a more smooth and stronger substrate than aluminum.

Therefore, none of the references cited against the claims teach or fairly suggest that the lubricant coat

contains more than 30% of the lubricant component set forth in Claim 7. Accordingly, the Applicants submit that the combination of these references does not reach the claimed invention.

Independent Claim 11 has been amended similarly. Therefore, Claims 9 and 13 have been canceled. Further, Claims 8 and 12 have also been canceled in light of the addition of similar subject matter to the respective independent claims.

New Claim 15 is an independent claim directed to a magnetic recording medium having an overcoat formed by the ion beam deposition (IBD) method with less than 5nm thickness, wherein the lubricant coat on the overcoat contains a perfluoropolyether structure having cyclic phosphazene at the end of the perfluoropolyether structure. Dependent Claim 16 limits the perfluoropolyether structure to contain the limitations of Claim 7, for example. Dependent Claim 17 requires the overcoat to be formed with ethylene gas having a concentration of more than 55% employed. Dependent Claim 18 requires the surface roughness after forming the overcoat to be within $\pm 10\%$. Thus, these claims also patentably define over the prior art, which does not show the 5nm thickness

overcoat formed by ion beam deposition, in combination with the other limitations noted.

Claims 7-14 were also rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-6 of parent patent number 6,605,335. Without admitting to the propriety of the rejection, the Applicants submit herewith a Terminal Disclaimer to avoid the rejection.

In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,



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